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Rivers, continuities and discontinuities

The case study of the Darro in Granada and the Tiber in Rome

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Synopsis

In the past the liaison between the cities and the watercourses they were founded on was mandatory. Nowadays with the expansion, overpopulation and soil consumption of the cities, this link has been lost. Watercourses are presented mainly in two ways within the urban fabric, a void acting as division but creating a common identity, or with a complete removal of the river's course, leaving only the suggestion to deal with the memory. The study aims to address two different situations in which the river becomes an element that does not increase the value of the urban fabric but decreases it. The first case is the one of Darro (a river buried underground to favor urban development) in the city of Granada, the second of the Tiber (a river which is not connected to the city) in Rome. The research seeks to bring attention to this increasingly current issue, proposing solutions through examples of merit of urban redevelopment.

Key words: River, urban fabric, division, connection, urban recovery.

1. Introduction

The direct relationship between the foundation of cities and watercourses until the late '800 is a subject that has already been overcome for years. With the growth of the cities, this relationship was however lost and with the technical development in construction, many watercourses were buried to give continuity to the urban space, to control floods or to heal unhealthy situations. The loss of the river, however, is not always due to its burial. So many other times it is channeled as in the case of the Tiber River and its muraglioni in the passage through the historic center of Rome, creating a discontinuity making the water hardly accessible for pedestrians. We must not forget that the river is synonymous of nature and works as a great natural infrastructure, passing through wide extensions of territory and establishing different relationships with the different parts of the city that it comes across.

This longitudinal character and this capacity to cross the territory and the cities has caused that in many occasions former channels were accompanied by infrastructures created afterwards, isolating rivers from the urban fabric. This is the case of the river Manzanares in Madrid or Cheonggyecheon in Seoul, both channels canceled by the gray infrastructure, subjects of an extensive project of urban renovation in the last decades. This infrastructural character is the main reason that in recent years the river has been rethought as an element of connection and not a wound of the urban space anymore, promoting numerous projects of recovery and re-appropriation of watercourses within the city. The recovery of the river and its use as a large urban infrastructure is the base of projects like the Turia Gardens in Valencia, where the void left by the river that has been diverted into artificial basins to control the floods, becomes opportunity to mend the city by creating a huge green park that holds together the many cultural structures that have been built along its margins (Palau de la Musica, Ciutat de les Arts i les Ciències). We use two examples, the Darro river in Granada and the Tiber river in Rome, to exemplify two ways of dealing with the river's reintegration into the urban fabric and its use by citizens as public space. Water, base of life and vegetation, is the generator of important green canals and promoting sustainable development of the contemporary city based on pedestrian users, discouraging vehicular mobility.

2. The case study

The coverage of the Rio Darro began in the sixteenth century and was completed by the nineteenth century, looking to increase the economic value of the land, reclaiming and replacing the poor housing that overlooked the river with the bourgeois buildings that still today characterize the city center. It was a clear case of violent denial of the natural element the foundation and development of the city was linked to. Today the different sensibility and mentality that guides the urban projects admits an hypothetic river recovery, which according to the research carried out, is necessary in order to redevelop this urban area that today is anonymous and confused, restoring historical identity and consistency with the urban context is located in. The aim of the research is therefore to find the correct strategy to make this renovation, in relation to the different urban contexts the river comes across. Rediscovering a

course of water that has been buried, in fact, puts us in front of many questions to be considered and solved in the contemporary city, mainly linked to mobility and to the new image of the city that it has become over time, certainly recovering the ancient memory. Our conclusion is that for the well-configured part of the historic center, the memory of the river can be recalled through signs and suggestions (caniveau for meteoric waters, paving composing the traces of bridges and linking ancient public spaces), showing how the recovery of the river does not necessarily imply its “physical” rediscovery, but can be simply suggested with an strategic project of ground modeling and consistent use of materials. In other cases, where an urban redevelopment is needed, a most invasive intervention of reopening the watercourse becomes an opportunity for a landscape project through the reintroduction of natural elements such the water and the vegetation, encouraging the pedestrians mobility and sustainability.

We find the opposite situation, with a total absence of anthropization, in the Tiber River when passing through the Ostiense-Marconi area. Former industrial zone, it is easy to understand how the city has grown turning its back on the river due to the conditions of poor sanitation. It is not understandable, however, that once deindustrialization has been widely overcome the city has not re-appropriated this wide green strip that could supply the lack of public spaces in this disperse area: the city does not reach the river and citizens can not access it either because the numerous facilities that are established on its banks have high fences, isolating the whole area and increasing the separation of pedestrians and water.

In the urban project drawn up in the mid-90s, the river park had a major importance as a key to reconnect both margins and to change the polarity of this area towards this large green infrastructure and reinforcing the perpendicular systems. The intermediate scale of the landscape and the toil of dealing with interstitial spaces, led in 2014 the university Roma Tre to propose the creation a Diffuse Botanical Garden that could work with these relationships and connections, putting into play the different actors operating in the area. In a delicate acupuncture exercise, the minute network of lost spaces interacts with the territorial main green systems, linking fabrics and flows in an exercise of wide repercussion.

3. Conclusion

In recent decades, there have been few examples that, through careful complex actions, have managed to reconnect citizens with their rivers. To name some consistent cases, we can turn our attention to French urban projects and the relevant actions they have been undertaken. In Lyon, Michel Corajoud for the Rhone and Desvigne/Dalnoky for the Saone in the early 90s, or Alexandre Chemetoff for the Vilaine in Renne, will approach the river as an active element for the urban ecology and creator of a rich and attractive typology of public space, opening a path that will later be continued by renowned projects as Situ Paysagistes for the Rhone.

The re-appropriation of water courses can today be a successful method for the recovery and redevelopment of contemporary cities, focusing on the usability of the public space over the mobility, and looking for the project strategy that best adapts to every context and every story, in line with the needs of modern societies.

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Biography

Francesca Paola Mondelli. (Vallo della Lucania, Salerno 1990), graduated in architecture at the University of Roma Tre cum laude, is interested in urban studies on the historical city, and in particular on the relationship between the landscape and the evolution of cities. He is currently attending a second level master's degree: OPEN, Architettura del Paesaggio, at the University of Roma Tre. From the period after graduation she is constantly dedicated to research and analysis on urban issues, publishing articles and participating in national and international conferences.

Marta Rabazo. PhD candidate at the ETSAM, DPA, UPM, in Madrid (Spain). She also coordinates the Master on Landscape architecture-OPEN at the Roma Tre University (Italy). Trained as an architect in Madrid, Spain, with a Master of Architecture from the Politecnica University of Madrid and a Postgraduate certificate in Design of Parks and Public Spaces from Roma Tre University of Rome, she has been working in architecture and landscape for the last twelve years for various firms including the award winning architectural office in New York REX P.C. and the renowned architectural and landscape office in Madrid, Solid Arquitectura. In 2008, Marta Rabazo joined Balmori Associates where she has been involved in various projects including Campa de los Ingleses park, Plaza Eusakdi, the Garden that Climbs the Stairs in Bilbao, Spain; the Botanical Research Institute of Texas in Fort Worth, TX; Yale Engineering Research Building and Farmington Canal Greenway in New Haven, CT; VIOL Headquarters in São Paulo, Brazil, and several competitions. Since 2010 she has collaborated with Roma Tre University of Rome, Italy as a teaching assistant and as coordinator of the II level Master in Landscape Architecture OPEN where she participates in the organization of several lectures, book presentations and seminars. Her interest in the intersection of landscape with infrastructure or architecture, sustainability and representation of landscape, guided her lectures and researches.